



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/644,377	08/23/2000	Marco Di Benedetto	112025-0201	1520

24267 7590 11/12/2003  
CESARI AND MCKENNA, LLP  
88 BLACK FALCON AVENUE  
BOSTON, MA 02210

EXAMINER

NGUYEN, HANH N

ART UNIT PAPER NUMBER

2662

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/644,377

Applicant(s)

BENEDETTO ET AL.

Examiner

Hanh Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Application filed on 8/23/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-29 is/are allowed.
- 6) ☒ Claim(s) 1-20 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The abstract of the disclosure is objected to because the Abstract is more than 150 word long. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-5, 8-11, 14, 15, 24 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, it is not clear whether “the storing spanning tree port states at the ports” are performed at the standby supervisor.

In claim 24, it is not clearly stated, on line 17, what the “port state information at the ports” is referred to.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2662

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 12, 13, 16-20 and 23 are rejected under 35 USC 103(a) as being unpatentable over **Budhraj et al.** (US Pat. No. 6,487,591 B1) in view of **Smith** (US Pat. NO. 6,515,969 B1).

In claims 1, 2 and 16-20 and 23 **Budhraj et al.** discloses, in Fig.2, a switch 16 ( a root) that designates MCS A 26 as a main controller (active supervisor) and MSC B 26' as a standby controller (standby supervisor). See col.3, lines 50-55. When there is a failure, the main controller 26 (active supervisor) switchovers to become a standby controller (standby supervisor) and the standby controller 26' becomes a new active controller such as the redundancy subsystem 60 ( active engine of the active supervisor) whose functions can be passed off to redundant controller 26' (in response to a failure, the active supervisor switchovers to standby supervisor, standby supervisor switchovers to active supervisor). See col.3, lines 10-20 & lines 50-55. The standby controller 26' (standby supervisor) stores active address of main controller 26 in the second memory location; and to store address of standby controller 26' in the first memory location. (storing spanning tree states of ports at the standby supervisor) in order to swap active status and standby status between the controller 26 and controller 26'. See col.4, lines 25-40. **Budhraj et al.** does not disclose each supervisor including at least one spanning tree protocol engine; running spanning tree protocol; and directing the ports to transition among the port states. **Smith** discloses an intermediate device 222 (See Fig.3) comprising a plurality of ports ( an intermediate device comprising ports for forwarding in a network); a plurality of spanning tree engines 302a-302d, each is associated with a VLAN designation. The spanning

Art Unit: 2662

tree engines transition the ports among a plurality of port states including a forwarding state and block state (directing the ports to transition among the port states). See Abstract & col.7, lines 45-50 & line 65 to col.8, line 5. Each spanning tree engine runs a separate tree protocol (running the spanning tree protocol). Therefore, it would have been obvious to one skilled in the art to use the spanning tree protocol associated with spanning tree engines of Smith into the controllers 26 & 26' of **Budhraj et al.** in order to continue operation of a spanning tree protocol at the switch despite failures or crashes occur. The motivation is to avoid significant network disconnection.

In claims 6 and 12, the limitations of these claims have been addressed in claim 1.

In claim 13, **Budhraj et al.** does not disclose generates BPDU messages; forwarding the BDDU messages; and wherein the BPDU message includes a topology change flag field.

**Smith** discloses spanning tree engines 302 communicate with ports 224, 226 to generate BPDU messages (generates BPDU messages) for transmission from the ports ( forwarding the BDDU messages). See col.8, lines 8-15. One skill in the art should understand that a TC flag field is in the BPDU message, therefore; examiner does not need to show a prior art to overcome this limitation. It should have been obvious to one skill in the art to combine **Smith** with **Budhraj et al.** to notify the standby supervisor any failures via BPDU message.

Claim 7 is rejected under 35 USC 103(a) as being unpatentable over **Budhraj et al.** (US Pat. No. 6,487,591 B1) in view of **Smith** (US Pat. NO. 6,515,969 B1), and further in view of **Goldman et al.** (US Pat. NO. 6,628,661 B1).

In claim 7, **Budhraj et al.** does not disclose if the network device is not at least one root, generating and forwarding topology change notification message. **Goldman et al.** discloses if a failure has occurred, switch A2 determines whether it has any available port. If not, the

Art Unit: 2662

switch A2 sends out frame to notify other switches of a topology change (if the network device is not at least one root, generating and forwarding topology change notification message). See col.8, lines 22-30. Therefore, it would have been obvious to one skills in the art to combine the **Goldman et al.** with **Budhraj et al.** to notify other switches that there is not any port available.

*Allowable Subject Matter*

Claims 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In claim 21, the prior art does not disclose a first manager disposed at the active supervisor, the first event manager configured to generate port change events in response to the ports transitioning from a current spanning tree port state to a new spanning tree port state.

Claims 26-29 are allowed.

The following is an examiner's statement of reasons for allowance:

In claim 26, the prior art does not disclose an event manager at the first and the second supervisors, the event manager configured to transmit spanning tree port state information from the active supervisor to the standby supervisor.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gai et al. (US Pat. No. 6,032,194) discloses Method and Apparatus for Rapidly Reconfiguring Computer Networks.

Seaman (US Pat. No. 6,611,502 B1) discloses Spanning Tree with Rapid Propagation of Topology Changes.

Regan et al. (US Pat. No. 6,578,086 B1) discloses Dynamically Managing the Topology of a Data Network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703 306-4744. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-3988 for regular communications and 703 308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

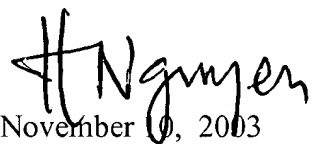
Fax number : 703 872-9314

Application/Control Number: 09/644,377

Page 7

Art Unit: 2662

Hanh Nguyen

A handwritten signature in black ink, appearing to read 'H. Nguyen', written over the printed name and date.

November 9, 2003

-